REMARKS

Claims 1, 3, 8, 9, 10, 12 and 21-34 have been examined on their merits.

Claims 2, 4-7, 9, 11, 13, 15, 17 and 19 are withdrawn from consideration.

Applicant herein cancels claims 9, 24, 33 and 34 without prejudice and/or disclaimer.

Applicant herein amends claim 1 with the cancelled recitations of claims 9 and 33, and amends claim 21 with the cancelled recitations of claims 24 and 34. Applicant requests entry of the amendments to claims 1 and 21, since they do not require any further search by the Patent Office (claims 9, 24, 33 and 34 were considered in the May 6, 2004 Final Office Action) and will place the application in better form for appeal.

Claims 1-8, 10-13, 15, 17, 19, 21-23 and 25-32 are all the claims presently pending in the application.

1. Claims 1, 3, 8, 10, 12, 21-23 and 25-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Furuya (JP Heisei 11-154733). The rejection of claims 33 and 34 is now moot due to their cancellation. Applicant traverses the rejection of claims 1, 3, 8, 10, 12, 21-23 and 25-32 for at least the reasons set forth below.

Furuya discloses, *inter alia*, a capacitor (613) coupled between a V_{DD} wire (605) and a V_{SS} wire (604). A MOS device (609) is connected in parallel with the capacitor (613). *See* Figure 6 of Furuya. In Furuya, V_{DD} and V_{SS} are directly connected to a V_{DD} pad and a V_{SS} pad, respectively. The technique disclosed in Furuya relates to a human-body model (HBM) or a machine model (MM), in which an electro-static discharge (ESD) stress originated from the outside

of a chip (reference numeral 100, 200, or 300) is applied to the V_{DD} pad and the V_{SS} pad.

Furuya lacks any teaching or suggestion of protecting a semiconductor device from electrostatic breakdown due to discharge of electric charge according to a charged device model. Other than a cursory statement on page 4 of the May 6, 2004 Final Office Action, the Patent Office has failed to substantively address these recitations of claims 33 and 34 (now in claims 1 and 21) anywhere in the May 6, 2004 Final Office Action. Furthermore, in a human-body model or a machine model, when a capacitor is not directly connected to the V_{DD} pad (when the capacitor is connected to an internal power source obtained by a power source conversion circuit, *e.g.*, a step-up power source and step-down power source), no electrostatic breakdown develops. Thus, if the technique described in col. 1, lines 21 to 23 of Merritt (U.S. Patent No. 4,786,956) is combined with Furuya, as pointed out by the Patent Office with respect to cancelled claims 9 and 24 (now included in claims 1 and 21, respectively), such a combination makes the electrostatic protection device of Furuya useless. In contrast, in a charge device model (CDM), in which a device is entirely charged and the charge is discharged through a pad or a terminal, there is a possibility of an electrostatic breakdown of a capacitor even if the capacitor is connected to an internal power source obtained by a power source conversion circuit. Thus, the ESD model recited in claims 1 and 21 is clearly different from the human-body model or the machine model of Furuya, and the structure of the invention recited in claims 1 and 21 is different from Furuya as well, especially with respect to the type of power source connected to the capacitor.

Furthermore, Furuya fails to teach or suggest that the wire resistance of a ground wire portion between an electrostatic protection element and a ground terminal is larger than a wire

resistance of the ground wire portion between the electrostatic protection element and a MOS capacitor, as recited in independent claims 1 and 21. In Figure 6 of Furuya, there is no indication that the MOS device (609) is positioned relative to a capacitor (613) such that the resistive relationship as recited in claim 1 is taught or suggested. The Patent Office asserts that Figure 6 of Furuya shows the claimed resistive relationship based on the positioning of the MOS device (609) along a ground wire relative to the capacitor (613) and a ground terminal (606). Figure 6 of Furuya, however, cannot support such an obviousness rejection. "When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value." MPEP § 2125. "[I]t is well established that patent drawings do not define the precise proportions of the elements and **may not be relied** on to show particular sizes if the specification is completely silent on the issue." MPEP § 2125 *quoting Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000) (*emphasis added*). "Absent any written description in the specification on quantitative values, arguments based on measurement of a drawing are of little value." *In re Wright*, 569 F.2d 1124, 1127 (C.C.P.A 1977). More recently, the Federal Circuit, in *Nystrom v. Trex Co.*, 71 U.S.P.Q.2d 1241 (Fed. Cir. 2004) stated that "speculative modeling premised on unstated assumptions in prior art patent drawings cannot be the basis for challenging the validity of claims reciting specific dimensions not disclosed directly in such prior art." *Id.* at 1250.

The Patent Office states that Figure 6 of Furuya shows that the "wire resistance of the ground potential between the ESD element connection point and the ground terminal 606 is larger than that between the ESD element connection point and the capacitor's connection point,

because a wire resistance is directly proportional to the length of the wire, and the **distance between the ESD element connection point and the ground terminal 606 is larger than that between the ESD element connection point and the capacitor's connection point.**" *See* May 6, 2004 Final Office Action, pg. 2 (*emphasis added*). Although the Patent Office claims that it is not relying on"figure 6 of Furuya to teach the precise proportions of the elements" or to "deduce a specific dimension or to scale off" a distance, the above emphasized quotation from the May 6, 2004 Final Office Action makes it very clear that the Patent Office **is relying** on Figure 6 of Furuya as allegedly supplying the necessary teaching for the claimed resistive relationship. *Hockerson-Halberstad* and *Wright* require the Patent Office to support its distance allegations with citations from Furuya's underlying text document regarding the distances between the component connections illustrated in Figure 6 of Furuya. Furuya states, *inter alia*, that it is "impossible, however, to disregard distance (impedance) to power-source pin and bypass capacitor of semiconductor integration apparatus...." *See* para. [0004].[1] Furuya further states that the capacitor and the electrostatic-protection element "are branched from the same power-source line, and are arranged mutually in vicinity...." *See* paras. [0009] and [0021]. Critically, Furuya is silent with respect to the impedance between the bypass capacitor, an electrostatic protection element and the ground terminal.

[1] Citations to Furuya are from a machine-generated translation of Furuya supplied by the Patent Office with the May 6, 2004 Final Office Action.

In the Response to Arguments section of the May 6, 2004 Final Office Action, the Patent Office claims that *Wright* stands for the proposition that the drawings of Furuya, along with the description of the article, can be reasonably relied upon for what they would teach one of ordinary skill in the art. Applicant's undersigned representative requested that the Patent Office indicate where in *Wright* the language that supports such an interpretation could be found, since the Patent Office's original citation to *Wright* provided no guidance. Since the Patent Office evidently declined to indicate where the supporting language could be found in Wright, Applicant assumes that no such support for the claimed interpretation of *Wright* exists. Moreover, the holding of *Nystrom* is contrary to the Patent Office's interpretation of *Wright*, since claims 1 and 21 are specific to a resistance between two connections, and Furuya lacks any specificity to such a resistance.

In addition, *In re Olson*, 101 U.S.P.Q. 401 (C.C.P.A 1954) directly contravenes the Patent Office's argument with respect to Figure 6 of Furuya as well. In *Olson*, a putative patentee attempted to amend a pending application based on the drawings included with the application. The *Olson* court found that a drawing having dimensions on the order of a few thousandths of an inch could not be scaled off to show that any particular distances or sizes are exactly equal when the specification was completely silent. *Olson*, 101 U.S.P.Q. at 403. Figure 6 of Furuya illustrates a semiconductor device, and it is well known that such devices involve measurements in the millionths of meters. Under *Olson* and *Nystrom*, the Patent Office would have to rely on the underlying text document of Furuya in order to support its distance assertions

with respect to Figure 6 of Furuya. However, as discussed above, Furuya has no such supporting text with respect to distances and/or resistance values.

Furuya lacks any teaching or suggestion of protecting a semiconductor device from electrostatic breakdown due to discharge of electric charge according to a charged device model. The Patent Office has failed to address these recitations of claims 33 and 34 (now in claims 1 and 21) anywhere in the May 6, 2004 Final Office Action.

Thus, since the Patent Office is improperly relying on Furuya to reject the recited elements of claims 1 and 21, Applicant submits that the "all limitations" prong of a *prima facie* case of obviousness has not been satisfied as required by *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). Applicant submits that independent claims 1 and 21 34 are allowable over Furuya, and Applicant further submits that claims 3, 8, 10, 12, 22, 23 and 25-32 are allowable as well, at least by virtue of their dependency from claims 1 and 21, respectively.

Since *Nystrom*, *Hockerson-Halberstad* and *Wright* foreclose the Patent Office from relying upon Figure 6 of Furuya, motivation to modify Figure 6 of Furuya with a MOS capacitor is lacking as well. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999) and *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) require the Patent Office to provide particularized facts on the record as to why one of skill would be motivated to modify Furuya with a MOS capacitor. Here, motivation is completely lacking since Furuya cannot be properly relied upon to support the obviousness rejection (*See* above discussion with respect to the "all limitations" prong of a *prima facie* case of obviousness). Without a reference to modify, the motivation prong of a *prima facie* case of obviousness cannot be fulfilled, as required by *In re Dembiczak* and *In re Zurko*.

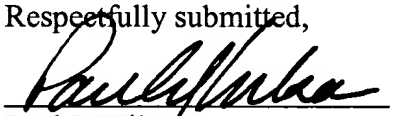
Thus, since the motivation prong of a *prima facie* case of obviousness has not been satisfied, Applicant submits that independent claims 1 and 21 are allowable over Furuya, and Applicant further submits that claims 3, 8, 10, 12, 22, 23 and 25-32 are allowable as well, at least by virtue of their dependency from claims 1 and 21, respectively.

2. Claims 9 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Furuya in view of Merritt (U.S. Patent No. 4,786,956). The rejection of claims 9 and 24 is now moot due to their cancellation.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Paul J. Wilson
Registration No. 45,879

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: September 23, 2004